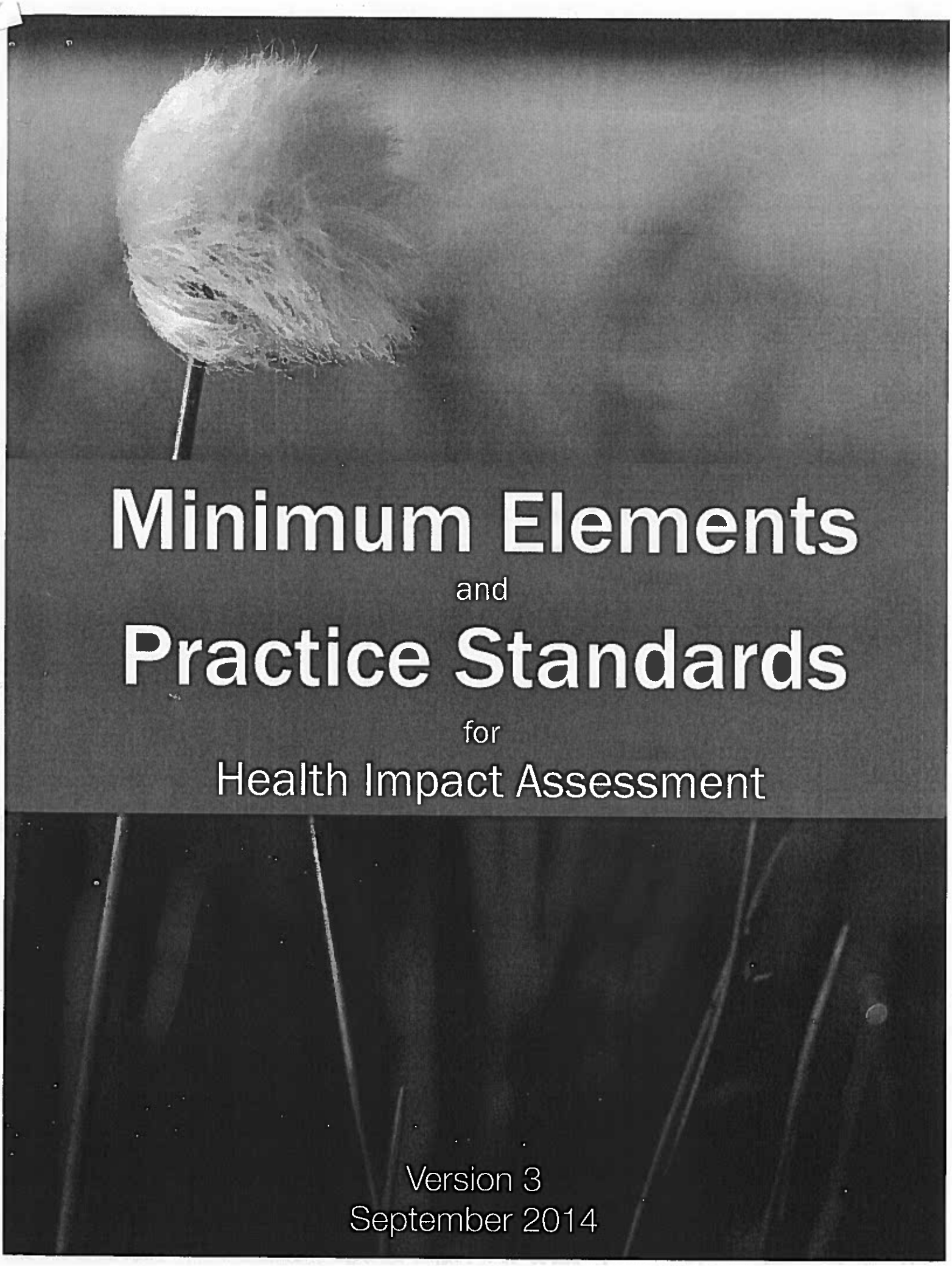

Minimum Elements
and
Practice Standards
for
Health Impact Assessment

Version 3
September 2014

Authorship

This document represents a revision of the *Minimum Elements and Practice Standards for Health Impact Assessment*, originally published by the North American HIA Practice Standards Working Group in April 2009 and revised in November, 2010.

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Purpose and Scope
of this document

What is Health Impact Assessment?

Health Impact Assessment (HIA) is a practice that aims to protect and promote health and to reduce inequities in health during a decision-making process. The International Association of Impact Assessment defines HIA as: ***a combination of procedures, methods and tools that systematically judges the potential, and sometimes unintended, effects of a policy, plan, program, or project on the health of a population and the distribution of those effects within the population. HIA identifies appropriate actions to manage those effects.*** With roots in the practice of Environmental Impact Assessment (EIA), HIA aims to inform the public and decision-makers when decisions about policies, plans, programs, and projects have the potential to significantly impact human health.

There exists considerable diversity in the practice and products of HIA due to the variety of policies, plans, programs, and projects assessed; the diverse settings in which decisions take place; and the evolution of the field. A number of available guidance documents for HIA describe the procedural steps and outputs of the HIA process. This document, in contrast, is intended to provide guidance on what is required for a study to be considered an HIA (Minimum Elements) and some benchmarks for effective practice (Practice Standards).

These standards are aligned with the central concepts and suggested approaches described in the World Health Organization's 1999 *Gothenburg Consensus Paper on HIA*, which first laid out the values that underpin HIA: democracy, equity, sustainable development, the ethical use of evidence, and a comprehensive approach to health.

Overall, we hope that these standards, now in their third iteration, will be viewed as relevant, instructive, and motivating for advancing HIA quality.

What are *Minimum Elements*?

In this document, Minimum Elements answer the question of "what essential elements constitute an HIA?". Minimum Elements distinguish HIA from other practices and methods that also aim to ensure the consideration of and action on health interests in public policy.

These Minimum Elements apply to HIA whether conducted independently or integrated within an environmental, social or strategic impact assessment.

What are *Practice Standards*?

Practice Standards answer the question "how should an HIA best be conducted?". A practitioner may use the Practice Standards as benchmarks for their own HIA practice and to stimulate discussion about HIA content and quality.

How Should the *Minimum Elements and Practice Standards* Be Used?

The *Minimum Elements and Practice Standards* can serve HIA practitioners as well as those who request, fund, and evaluate HIA practice, for example:

- a practitioner may use the *Minimum Elements and Practice Standards* as a benchmark to plan, implement, or evaluate an individual HIA;
- educators may use the *Minimum Elements and Practice Standards* to organize trainings and stimulate dialogue regarding the practice of HIA;
- funders or regulators may use or adapt the *Minimum Elements and Practice Standards* to create standards for HIA practice or to screen HIA proposals;
- evaluators of the field of HIA may use the *Minimum Elements and Practice Standards* to identify HIAs (*i.e.*, to distinguish them from other practices) and to examine how various practice benchmarks relate to the effectiveness of the HIA process;
- policy-makers may use the *Minimum Elements and Practice Standards* in designing institutional or regulatory requirements, supports, or incentives for HIA.

Caveats and Cautions

The *Practice Standards* are not rigid criteria for acceptability but represent the authors' perspective on best practices. Each HIA will vary along a continuum to meet the requirements of the scope, timeline, decision context, available resources, and expertise. Real-world constraints and varying levels of capacity and experience will result in appropriate and ongoing diversity of HIA practice. Every practice standard in this document may not be achievable in every HIA.

Many of the *Practice Standards* describe aspects of HIA process that are not always apparent in the final HIA product (e.g., an HIA report). Evaluation of an individual HIA or the field of practice using the *Minimum Elements and Practice Standards* should recognize that published HIA reports might not include documentation sufficient to gauge the performance of HIAs against these standards. Any evaluation of HIAs against these standards should therefore incorporate discussion with HIA authors in order to fully understand the extent to which the standards have been achieved.

Minimum Elements of HIA

Comprehensive Health Impact Assessments (HIA) should include the following minimum elements, which together distinguish HIA from other processes used to assess and inform decisions:

1. HIA is conducted to assess the potential health consequences of a proposed program, policy, project, or plan under consideration by decision-makers, and is conducted in advance of the decision in question.

2. HIA involves and engages stakeholders affected by the proposal, particularly vulnerable populations.

3. HIA systematically considers the full range of potential impacts of the proposal on health determinants, health status, and health equity.

4. HIA provides a profile of existing conditions for the populations affected by the proposal, including their health outcomes, health determinants, and vulnerable sub-groups within the population, relevant to the health issues examined in the HIA.

5. HIA characterizes the proposal's impacts on health, health determinants, and health equity, while documenting data sources and analytic methods, quality of evidence used, methodological assumptions, and limitations.

6. HIA provides recommendations, as needed, on feasible and effective actions to promote the positive health impacts and mitigate the negative health impacts of the decision, identifying, where appropriate, alternatives or modifications to the proposal.

7. HIA produces a publicly accessible report that includes, at minimum, documentation of the HIA's purpose, findings, and recommendations, and either documentation of the processes and methods involved, or reference to an external source of documentation for these processes and methods. The report should be shared with decision-makers and other stakeholders.

8. HIA proposes indicators, actions, and responsible parties, where indicated, for a plan to monitor the implementation of recommendations, as well as health effects and outcomes of the proposal.

HIA
Practice Standards

Adherence to the following standards is recommended to advance effective HIA practice:

1. GENERAL STANDARDS FOR THE HIA PROCESS

1.1 HIA is a forward-looking activity intended to inform a proposed program, policy, project, or plan under consideration by decision-makers; however, an HIA may evaluate an existing program, policy, project, or plan in order to inform a prospective decision or discussion.

1.2 An HIA should include the steps of screening, scoping, assessment, recommendations, reporting, and evaluation.

1.3 Each HIA process should begin with explicit written goals that can be used to evaluate the success and impacts of an HIA process.

1.4 The HIA should be responsive to the needs and timing of the decision-making process.

1.5 HIA requires integration of knowledge from many disciplines as well as from affected communities. The practitioner or practitioner team must take reasonable steps to identify, solicit, and utilize this expertise to both identify and answer questions about potentially significant health impacts.

1.6 Meaningful and inclusive stakeholder (e.g., affected community, public agency, decision-maker) participation in each step of the HIA supports HIA quality and effectiveness. Each HIA should have a specific engagement and participation approach that utilizes participatory or deliberative methods suitable to the needs of stakeholders and context.

1.7 Monitoring is an important follow-up activity in the HIA process. The HIA should propose a monitoring plan to track the health-related outcomes of a decision and its implementation.

1.8 HIA integrated within another impact assessment process should adhere to these practice standards to the greatest extent possible.

2. STANDARDS FOR THE SCREENING STEP

While screening may be part of a linear HIA process, it may also occur apart from and prior to an HIA, without negative effects on practice quality. The impetus or decision to conduct an HIA may result from forces including political decisions or regulatory requirements and may be conducted by individuals or organizations other than HIA practitioners. Because of these alternative drivers for HIA, a process for screening is not considered an essential element.

2.1 Screening should clearly identify all the decision alternatives under consideration by decision-makers at the time the HIA is considered.

2.2 Screening should determine whether an HIA would add value to the decision-making process. The following factors may be among those weighed in the screening process:

a) the potential for the decision to result in substantial effects on public health, particularly those effects which are avoidable, involuntary, adverse, irreversible, or catastrophic;
b) the potential for unequally distributed impacts;
c) the potential for impacts on populations with poor health;
d) stakeholder concerns about a decision's health effects;
e) the potential for the HIA to add new information that would be useful to decision-makers;
f) the potential for the HIA to result in timely changes to a policy, plan, program, or project;
g) the availability of data, methods, resources, and technical capacity to conduct analyses;
h) the availability, application, and effectiveness of alternative opportunities or approaches to evaluate and communicate the decision's potential health impacts.

2.3 Sponsors of the HIA should notify, to the extent feasible, decision-makers, stakeholders, affected individuals and organizations, and responsible public agencies on their decision to conduct an HIA.

3. STANDARDS FOR THE SCOPING STEP

3.1 The scoping process should establish the individual or team responsible for conducting the HIA and should define roles for the HIA team, funders, technical advisors, stakeholders, and other partners.

3.2 During scoping, the goals and anticipated outcomes of the HIA should be clearly established and documented.

3.3 A plan for conducting the HIA should be established that includes identification of:

a) the decision and decision alternatives that will be studied;
b) potential significant health and health equity impacts that will be studied;
c) demographic, geographical, and temporal boundaries for impact analysis;

d) research questions for impact analysis;
e) evidence sources and research methods expected for each research question in impact analysis;
f) an approach to the evaluation and characterization of impacts and their distribution;
g) roles for experts and key informants;
h) the standards or process, if any, that will be used for determining the significance of health impacts;
i) a plan for external and public review; and
j) a plan for disseminating findings and recommendations.

3.4 A stakeholder engagement plan should be developed that establishes not only which stakeholders should be invited to participate in the process, but also the level of engagement to be solicited, and the methods that will be utilized to promote stakeholder participation throughout the HIA process.

3.5 During scoping, the range of health issues to be examined in the HIA should be clearly defined.

3.5.1 Scoping should include a systematic consideration of potential pathways that could reasonably link the decision and/or proposed activity to health, whether direct, indirect, or cumulative.

3.5.2 Scoping should consider both individual health outcomes and contextual health determinants.

3.5.3 The final scope should focus on those impacts with the greatest potential significance, with regards to factors including but not limited to magnitude, severity, certainty, stakeholder priorities, and equity.

3.5.4 In identifying and evaluating priority health issues, practitioners should consider the expertise of health professionals, the experience of the affected communities, and the information needs of decision-makers.

3.6 The scope should include an approach to evaluate any potential inequities in impacts based on population characteristics, including but not limited to age, gender, income, place (disadvantaged locations), and race or ethnicity.

4. STANDARDS FOR THE ASSESSMENT STEP

4.1 Assessment should include, at a minimum, a summary of existing (baseline) conditions and a assessment of health impacts.

4.2 Existing conditions should present a profile of relevant health status and health determinants among the affected communities. The existing conditions should also document known

population health vulnerabilities including evidence of poor health status among affected communities.

4.3 Assessment of health impacts should be based on a synthesis of the best available evidence. This means:

4.3.1 Evidence considered may include existing data, empirical research, professional expertise and local knowledge, and the products of original investigations.

4.3.2 When available, practitioners should utilize evidence from well-designed and peer-reviewed systematic reviews.

4.3.3 HIA practitioners should consider evidence both supporting and refuting particular health impacts.

4.3.4 The expertise and experience of affected members of the public (local knowledge), whether obtained via the use of participatory methods, collected via formal qualitative research methods, or reflected in public testimony, comprise a legitimate source of evidence.

4.3.5 In summarizing the quality of evidence for each pathway, the HIA should rate the strength of evidence based on best practices for the relevant field (i.e., standards for meta-analysis, epidemiologic studies, qualitative methods, or others as appropriate).

4.3.6 Practitioners should acknowledge where evidence is insufficient to evaluate or judge health effects identified as priority issues in the screening and scoping stage of HIA.

4.4 To support determinations of impact significance, the HIA should characterize health impacts using parameters such as (but not limited to) direction, severity, magnitude, likelihood, and distribution within the population. These can be understood as follows:

Direction: Whether the potential change would be beneficial or adverse

Severity: More severe effects include those that are disabling, life-threatening, and permanent

Magnitude: How widely the effects would be spread within a population or across a geographical area

Likelihood: How likely it is that a given exposure or effect will occur.

4.5 Assessment of health impacts should explicitly acknowledge methodological assumptions as well as the strengths and limitations of all data and methods used.

4.5.1 The HIA should identify data gaps that prevent an adequate or complete assessment of potential impacts.

4.5.2 Assessors should describe the uncertainty in predictions.

4.5.3 Assumptions or inferences made in the context of modeling or predictions should be made explicit.

4.5.4 Justification for the selection or exclusion of particular methodologies and data sources should be made explicit (e.g., resource constraints).

4.5.5 The HIA should acknowledge when available methods were not utilized and why (e.g., resource constraints).

4.6 The lack of formal, scientific, quantitative, or published evidence should not preclude reasoned evaluation of health impacts.

5. STANDARDS FOR THE RECOMMENDATIONS STEP

5.1 The HIA should include specific recommendations to manage the health and equity impacts identified, including recommendations supporting a specific decision alternative; modifications to the proposed policy, program, plan, or project; or mitigation/enhancement measures.

5.2 Recommendations should consider not only the mitigation of adverse effects, but also the potential to enhance health benefits.

5.3 Recommendations may not be indicated in all cases: for example, if there are no identified adverse impacts or if an HIA practitioner is not legally able to take a policy position.

5.4 The following criteria may be considered in developing recommendations and mitigation measures: responsiveness to predicted impacts, specificity, technical feasibility, enforceability, and authority of decision-makers.

5.5 Input from the affected population(s) should be solicited and considered during development of recommendations to ensure that the recommendations are responsive to community needs and address community concerns in an acceptable manner.

5.6 The criteria used for any prioritization of recommendations should be explicitly documented.

5.7 Recommendations are effective only if they are adopted and implemented; therefore, input should be solicited from decision-makers on the developed recommendations and considered to ensure that the recommendations can be translated into actionable measures.

5.8 Where needed, expert guidance should be utilized to ensure recommendations reflect current effective practices.

5.9 Where possible, recommended mitigations should be further developed and integrated into a Health Management Plan that clearly outlines how each mitigation measure will be implemented. Management plans commonly include information on: deadlines, responsibilities, management

structure, potential partnerships, engagement activities, and monitoring related to the implementation of the HIA mitigations.

5.10 An HIA may include recommendations that go beyond the purview of the proposal decision-maker and that target different audiences such as project investors or financers, implementing agencies, regulating agencies, health care agencies, or researchers.

6. STANDARDS FOR THE REPORTING STEP

6.1 The parties conducting the HIA should provide a publicly accessible final report that includes, at minimum, the HIA's purpose, findings, and recommendations. The report should also document the process involved in arriving at findings and recommendations (e.g., assessment methodology and recommendation setting approach) or alternatively provide separate documentation of these processes.

6.2 To support effective, inclusive communication of the principal HIA findings and recommendations, a succinct summary should be created that communicates findings in a way that allows all stakeholders to understand, evaluate, and respond to the findings.

6.3 The full HIA report should document the screening and scoping processes and identify the sponsor of the HIA and the funding source, the team conducting the HIA, and all other participants in the HIA and their roles and contributions. Any potential conflicts of interest should be acknowledged.

6.4 The full HIA report should, for each specific health issue analyzed:

a) discuss the available scientific evidence;
b) describe the data sources and analytic methods used for the HIA including their rationale;
c) profile existing conditions;
d) detail the analytic results;
e) characterize the health impacts and their significance;
f) list corresponding recommendations for policy, program, plan, or project alternatives, design, or mitigations; and
g) describe the limitations of the HIA.

6.5 The HIA reporting process should offer stakeholders and decision-makers a meaningful opportunity to critically review evidence, methods, findings, conclusions, and recommendations. The HIA practitioners should address substantive criticisms.

6.6 The HIA report should be made available and readily accessible in a format that is accessible to all stakeholders, taking into consideration factors such as education, language, and digital access.

7. STANDARDS FOR EVALUATION

Evaluation of the HIA process, impacts, and outcomes is necessary for field development and practice improvement. While evaluation thus plays an important role, it is not an essential element of HIA and in practice is often not conducted. When evaluation is conducted, the following should be considered:

7.1 The HIA may be evaluated in terms of process. *Process evaluation* attempts to determine the effectiveness of how the HIA was designed and undertaken, including preparation, research, reporting, participation, and follow-up. Process evaluation may be conducted either after the completion of the HIA, or during the course of the HIA to facilitate adaptations that will improve HIA process.

7.2 The HIA may also be evaluated in terms of its impact. *Impact evaluation* seeks to understand the impact of the HIA itself on the decision and the decision-making process. Impact evaluation assesses the extent to which the HIA influenced various stakeholders and the extent to which the HIA recommendations were accepted and implemented.

8. STANDARDS FOR MONITORING

Monitoring (sometimes termed *outcome evaluation*) tracks the effect of the proposed policy, project, or program on health outcomes and/or determinants of concern.

Monitoring the implementation and outcomes of a decision is properly the responsibility of the project proponent or an authorizing, funding, or implementing public agency. Comprehensive monitoring is not the responsibility of, and usually not within the capacity of, HIA practitioners. Nonetheless, the HIA should, where possible, propose a monitoring plan.

8.1 The monitoring plan should include:

a) goals for short- and long-term monitoring;
b) indicators for monitoring;
c) triggers or thresholds that may lead to review and adaptation in decision implementation;
d) the identification of resources required to conduct, complete, and report the monitoring; and
e) a mechanism to report monitoring outcomes to decision-makers and stakeholders.

8.2 When monitoring is conducted, methods and results from monitoring should be made available to the public, including the affected community, in a timely fashion.

Key References

This document is not intended to comprise a guidebook on how to conduct HIA, but rather a guidance document on what elements are essential or desirable to include. Many useful guides and toolkits exist that can help practitioners with operationalizing HIA and with following best practices in doing so. Some key references that will help HIA practitioners and those wishing to better understand HIA are listed below.

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Society for Practitioners of HIA (SOPHIA) website. http://hiasociety.org/

EPA
www.epa.gov/research
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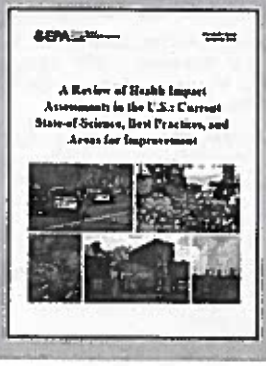
A Review of Health Impact Assessments in the U.S.: Current State-of-Science, Best Practices, and Areas for Improvement

A review was conducted of 81 health impact assessments (HIAs) from the U.S. to obtain a clear picture of how HIAs are being implemented nationally and to identify potential areas for improving the HIA community of practice. The review was focused on HIAs from four sectors that the U.S. Environmental Protection Agency's (EPA's) Sustainable and Healthy Communities Research Program has identified as target areas for empowering communities to move toward more sustainable states (EPA 2011). These four sectors are Transportation, Housing/Buildings/Infrastructure, Land Use, and Waste Management/Site Revitalization.

The *Minimum Elements* of HIA, developed by the North American HIA Practice Standards Working Group (2010), were chosen from the broad body of HIA guidance as the benchmark against which to review the HIAs. The HIA Review systematically documented organizations involved in conducting the HIAs; funding sources; the types of community-level decisions being made; data, tools, and models used; self-identified data needs/gaps; methods of stakeholder engagement; pathways and endpoints; characterization and prioritization of impacts; decision-making outcomes/recommendations; monitoring and follow-up measures; HIA defensibility and effectiveness; attainment of the *Minimum Elements* of HIA; areas for improvement; and identification of best practices.

The results of the HIA Review were synthesized to identify the current state of the HIA practice in the U.S., best practices in HIA, and areas for improvement (Rhodus et al. 2013).

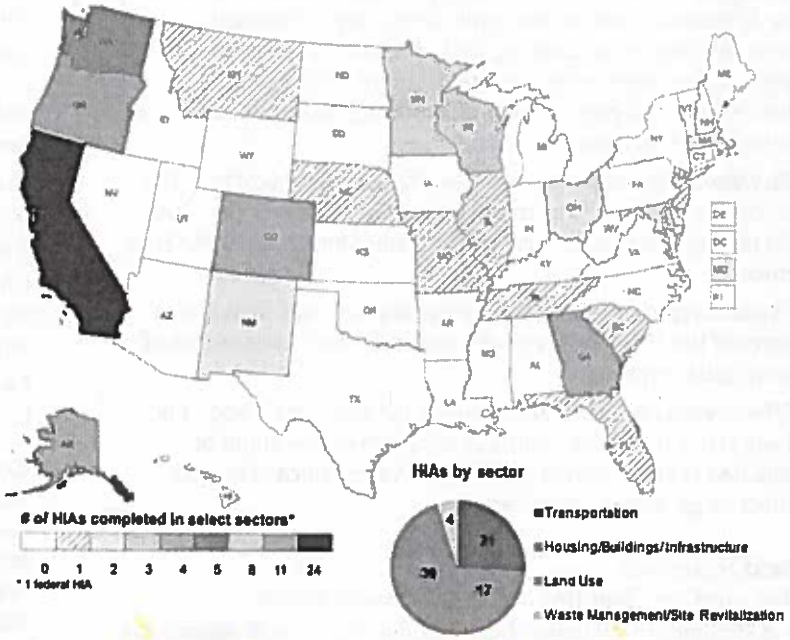


Health Impact Assessment

The National Research Council (2011) defines HIA as:

...a systematic process that uses an array of data sources and analytic methods and considers input from stakeholders to determine the potential effects of a proposed policy, plan, program, or project on health of a population and the distribution of those effects within the population. HIA provides recommendations on monitoring and managing those effects.

Findings



State of HIA Practice

Use of HIA to inform decision-making is on the rise. Reviewed HIAs were implemented most frequently to inform decisions at the local level and less frequently at county, state, and federal levels.

Implementation of the six-step HIA process varied greatly among the HIAs.

- *Screening* – Documentation of the screening process was often lacking, making it difficult to discern what factors went into making the decision to perform the HIA.
- *Scoping* – Documentation of the scoping process was inconsistent and often lacked details of the overall HIA plan (e.g., research questions, rationale for reductions in scope, etc.).
- *Assessment* – The depth and defensibility of evidence is crucial to the effectiveness of impact assessment; however, considerable disparities existed in the depth of impact assessment, extent of data collection and analysis, and defensibility of evidence.

  The extent of baseline profiles created in some HIAs was very limited and in others, missing completely. Most HIAs qualitatively characterized direction and distribution/equity of impacts, but rarely considered likelihood, magnitude, or permanence of the impacts. In addition, quantification of impacts was lacking throughout the HIAs.
- *Recommendations* – Recommendations most often proposed modifications to the decision and/or mitigations of the decision's negative health impacts, but sometimes stated support for or opposition to the proposed decision as-is.

Prioritization of impacts and/or recommendations can be based on a number of factors, but those utilized most frequently in the HIAs included stakeholder/community input, literature and research, impact on health and relevance to project/decision interests, and equity of impacts.

- *Reporting* – Reporting and communicating the results of HIA is crucial to informing decision-making; yet, transparent documentation of communication plans, processes, methods, findings, sponsors, funding source(s), and/or participants and their roles was inconsistent and sometimes lacking.
- *Monitoring and Evaluation* – This step of the HIA process was severely lacking. Publicly-available documentation of and/or plans for all three forms of evaluation called for in HIA – process evaluation, impact evaluation, and outcome evaluation – were very limited.

Adherence to Minimum Elements of HIA varied substantially among the HIAs reviewed, although implementation of all of the *Minimum Elements* was quite uncommon. Elements most often missing included using best available evidence to characterize impacts (direction, magnitude, likelihood, distribution, and permanence), monitoring and evaluation, and transparency in documentation.

Stakeholder/community engagement in each step of the HIA process is ideal, but was rarely witnessed. In fact, some HIAs did not engage stakeholders or the community at all in the HIA process.

Characterization of environmental impacts was included in many of the HIAs, but typically only involved assessments of air quality impacts.

Effectiveness of HIA varied among the HIAs reviewed. For those HIAs for which measures of effectiveness could be obtained (via an internet search), the vast majority showed direct or general effectiveness.

Best Practices

Best practices identified in the HIA Review include:

- Adherence to *Minimum Elements and Practice Standards for Health Impact Assessment* or similar criteria by NRC (2011)
- HIA as a tool in Environmental Impact Assessment
- Equity promotion
- Documentation of Screening and Scoping
- Rules of Engagement Memo/Memorandum of Understanding
- Communication/Reporting Plan
- Stakeholder involvement
- Transparent literature search/review documentation
- Use of best available data (qualitative and quantitative)
- Quality of evidence evaluation
- Identification of data gaps
- Use and/or adaption of existing tools, methods, and metrics
- Detailed documentation of data and methodology
- Use of Geographic Information Systems
- Impact pathways/logic frameworks
- Clear summary of impact assessment
- Confidence estimates of projected impacts
- Prioritization process for recommendation development/ action
- Feasible/actionable recommendations
- Implementation plan for recommendations
- Clear/transparent HIA Report
- Process evaluation
- Monitoring plan – impact and outcome evaluation

Areas for Improvement

The following areas for improvement, if addressed, would significantly advance the HIA community of practice:

Adherence to Minimum Elements and Practice Standards or similar criteria by NRC (2011) would ensure that the essential components of HIA are put in practice and would result in marked increases in rigor, quality, defensibility, and effectiveness. Essential components of HIA that are particularly lacking and should be targeted for improvement, include: establishment of baseline conditions, characterization of impact, stakeholder and community engagement, transparency in documentation, and monitoring and evaluation.

Use of HIA to inform decision-making at all levels, including county, state, and federal decisions.

Identification of data gaps would provide transparency in HIA reporting, but could also be useful in helping to refine methods and approaches used in HIA and identify areas for future research.

Broader utilization of existing tools and resources could contribute to a more robust impact assessment and help to close some of the data gaps found in HIA.

Closing the data gaps and maximizing the evidence available for use in HIA would result in more robust assessments and improved efficiency in predicting health impacts.

Consistency in HIA terminology, like transparency, would help to advance HIA reporting and rigor.

Conclusions

While HIAs have helped to raise awareness and bring health into decisions outside traditional health-related fields, the effectiveness of HIAs in bringing health-related changes to pending decisions in the U.S. varies greatly. This, combined with the lack of monitoring, health impact management, and other follow-up, could be limiting the overall utilization of HIA in the U.S.

Understanding the current state of practice and applicability of HIAs in the U.S., as well as best practices and areas for improvement, will help to advance the HIA community of practice, improve the quality of assessments upon which stakeholder and policy decisions are based, and promote healthy and sustainable communities.

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www.epa.gov/research/healthscience/health-impact-assessment.htm

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